

Distr.
GENERAL

Working paper 14
14 November 2006

ENGLISH ONLY

**UNITED NATIONS STATISTICAL COMMISSION and EUROPEAN COMMISSION
ECONOMIC COMMISSION FOR EUROPE STATISTICAL OFFICE OF THE
CONFERENCE OF EUROPEAN STATISTICIANS EUROPEAN COMMUNITIES
(EUROSTAT)**

Joint UNECE/Eurostat Work Session on Migration Statistics
organised in collaboration with UNFPA
Edinburgh, Scotland, 20-22 November 2006

Item 4 of the provisional agenda

**CHALLENGES TO IMPLEMENT THE MIGRATION SECTION OF THE CES
RECOMMENDATIONS FOR THE 2010 ROUND OF POPULATION AND HOUSING
CENSUSES**

Applicability of International Recommendations on International Migration in a country using registers: the case of Norway*

Submitted by Statistics Norway

ABSTRACT

1. The question that is asked is how useful and applicable are the international recommendations on migration statistics for register-based countries. Norway is used as a case.
2. Definitional issues and variable issues are rather different with regard to the possibility of compliance with international recommendations. For that reason, these two aspects are dealt with separately.
3. In a system as in Norway, there is only one set of definitions of the target population. Statistics Norway does not control the residence rules, and for several reasons cannot do much to change basic definitions of them. Administrative needs often outweigh the statistical

* This paper has been prepared by Kåre Vassenden at the invitation of the secretariat.

considerations. Population registration is basically legal decision-making. Some of the authority is conceded to the other Nordic countries.

4. With regard to definitions, Statistics Norway is dependant on the population registration system. Alternative paths to increased international comparability for Norwegian migration statistics are not easy solutions.

5. With regard to the descriptive stock variables, the situation is different. Access to event data is a crucial factor. A common linking key is a prerequisite for the processing.

I. INTRODUCTION

6. Some National Statistical Institutes (NSIs) rely on administrative records or registers for the bulk of the statistics on migration and international migrants. These NSIs face special challenges and opportunities in their attempts to comply with international recommendations.

7. A characteristic of a register-based system is that the production of statistics is very often dependant on sources that are not governed by the NSI, and with purposes that are not only statistical. Consequently, it is likely that the NSI does not have sufficient influence on the data to be able to comply fully with international recommendations. On the other hand, a register system normally yields a current flow of data that are, after all, of great value for the production of statistics and ultimately for the users.

8. The questions that are asked are: How useful and applicable are the international recommendations on migration statistics for register countries? Are the recommendations used to improve the statistics, and is it possible to follow up the requests for harmonisation? In general, what are the framework conditions for a register-based NSI?

9. In order to answer these questions and to expand on the conditions of register-based countries, Norway is used as a case. It is difficult to give answers that are true for all countries with registers, as their situations differ considerably.

10. In this connection, the term "migration statistics" is short for "the field of demographic statistics that covers international migration and persons with a background from immigration".

11. Regarding the specific recommendations, in practice, relevant parts of the CES Recommendations on 2010 Population Census are used as a basis, but the discussion is general and not restricted to this document only.

II. DIVIDING LINES IN CONNECTION WITH INTERNATIONAL RECOMMENDATIONS

II.1. National and international considerations

12. The main task of an NSI is to satisfy the national demand for statistics on its own country. Most of these statistics are seen as quite useful even if there are no references to or

comparisons with other countries. However, including some international comparisons adds value to the national statistics.

13. Then there are users with a bird's eye perspective of the world for whom the statistics from different countries must be comparable, or deviations must be documented at the very least.

14. The international recommendations have both the national and the international considerations in mind. One of the aims of the recommendations is to contribute to improvements of the national statistics in each country. The other aim is to obtain international statistics that are reasonably comparable – if necessary by asking the NSIs to depart from established national standards.

The situation for a register country with regard to the two aims of the recommendations

15. In an established register country with a developed production of migration statistics, the aim of the recommendations to encourage national developments has limited relevance. Administrative systems that have been operational for decades, and statistics based on them, are not normally very open to international statistical recommendations. However, where systems undergo thorough revisions or new systems are established, international recommendations may play a role. They may be used as an extra argument in discussions with other parties.

16. With regard to the second aim – achieving improved international comparability– there are no simple answers. The rest of the paper is devoted mainly to this aspect of the recommendations.

Adjusting the national standards, producing alternative statistics, or just describing the deviations?

17. In the NSI, the international recommendations give rise to discussions about alternatives. If it were possible to adjust the national standards to achieve compliance with the recommendations, this would be the best solution in the long run.

18. The second best solution is to produce tailor-made and comparable statistics for the international users only. In this situation the recommendations may be seen as an ordinary request to an NSI for special statistics. One drawback with this solution is that it may be difficult to explain to the users the status of such alternative statistics.

19. If none of these alternatives are achievable, descriptions and numerical estimates of the deviations between the recommendations and the national statistics may serve as a "consolation". However, such descriptions may in some cases require small research projects to provide the relevant facts.

20. This paper mainly tries to answer whether the second solution is possible for Norway. A comprehensive description of the deviations is a task for the future.

II.2. Definition of the target population versus issues relating to the variables

21. International recommendations on population censuses and on migration statistics contain a section that defines the basic units in the statistics (or delimits the category that should be included in the statistics). This means that there may be a chapter about "Population to be enumerated" or "Definition of international migrant for the purpose of measuring flows".

22. A very different question is what information is needed on these persons and events, i.e. which variables should be produced and what should their qualities be.

23. Definitional issues and variable issues turn out to be quite different with regard to the possibility of compliance with international recommendations. For that reason, these two aspects are dealt with separately.

III. THE SITUATION FOR A REGISTER-BASED NSI WITH REGARD TO DEFINITIONS OF THE RESIDENT POPULATION AND MIGRATION EVENTS

III.1. Only one set of definitions of the target population

24. Immigration and emigration together with births and deaths explain population changes. In countries that rely on traditional population censuses for the stock statistics and, for instance, administrative sources for the migration event statistics, the definitions of migrants may differ from the rules governing the definition of usual residence. The effect will normally be an apparent residual in the population account.

25. In Norway and other countries with similar systems the registered migrations constitute direct inputs to the stock. This means that we face only one set of rules governing both the migrations and the stock¹. This one set of rules is found partly in the Act of population registration, in the regulations to the law and in directives and guidelines from the Office of the National Registrar (in the Directorate of Taxes) to the local population registries. The interpretation of the rules and the operational procedures followed at local level will play a role for the final result.

26. The fact that there is only one set of rules makes it easier to discuss their effects. On the other hand, the situation clearly demonstrates that a discussion of the rules cannot be reduced to a question of migration statistics. The issue of definitions is fundamental for all fields of person

¹ The only additional rules influencing the stock are those governing which births are input to the population and which are not (someone born to non-residents will not be regarded as resident).

statistics and for the many administrative applications of the same information basis in Norwegian society as a whole.

III.2. What Statistics Norway is concerned with regarding these rules

27. If we look at the activities performed by Statistics Norway throughout the years, and discussions held among statisticians, two issues regarding the residence rules could be identified. Both of them relate to the correspondence between reality and the rules.

28. First, there are discrepancies that are *intended* or accepted by the lawmakers. From a statistical point of view it would have been an advantage if the night-rest principle² had a stronger position and protection in the law. This means that the rules should be adjusted in order to stay more in touch with the actual residency, at least for some categories that cause difficulties for the interpretation of the statistics. In connection with statistics on international migration, the main problem is that the criteria for registration of a person as an emigrant in some cases seem to be stricter than what is reasonable for most users of these statistics³.

29. The *unintended* discrepancies between reality and rules are the second concern for Statistics Norway. Regardless of the quality of the governing rules, these rules should be followed. The quality of the registration raises a lot of issues, and these issues occupy a substantial part of the resources devoted to the relations between Statistics Norway and the agency responsible for the registrations.

III.3. A fundamental fact: Statistics Norway does not control the residence rules

30. For international users, all that matters is whether the official Norwegian rules and the corresponding paragraphs in the recommendations are similar or not. There are of course some similarities (e.g. regarding rules for diplomats and militaries). The point is, however, that Statistics Norway does not control the official set of rules and the actual registration practices. In Norway, this area of competence is simply not in the hands of the NSI. It is the Directorate of Taxes, the Ministry of Finance and, in the final instance, the politicians that are in charge.

31. One effect of the lack of authority in these matters is that Statistics Norway cannot predict possible changes. Statistics Norway cannot comment on how the residence rules will be formulated in 2010/2011.

² The principle that a person should be registered as resident where he has his daily night-rest.

³ For the purpose of preventing tax evasion, the rules make it difficult "to emigrate" (i.e. to be registered as emigrated).

III.4. *Why a register-based NSI cannot do much to change basic definitions*

32. Compared with countries where administrative registers play a minor role, the situation for Norway can be described by the following main points:

Heavy administrative needs often outweigh the statistical considerations

33. One of the main reasons for the Central Population Register (CPR) being established by Statistics Norway in 1964 was the advantages for the field of population statistics. More than 40 years later, Norway is a highly regulated society with an administrative register for almost everything. The CPR plays a key role in this society, and has to serve a lot of interests in addition to the statistical ones. In a welfare state with many rights and obligations for its residents and a high level of taxation, the administrative needs are linked to major economic and societal values. In this situation it is not surprising that the statistical concerns are not always given priority.

Population registration is legal decision making, not only passive recording

34. The term “administration” is usually associated with "organising and supervising"⁴. In addition, however, public administration includes the task of making decisions about the rights and duties of individuals, i.e. to exercise authority⁵.

35. In Norway, the concept of population registration is very much an activity that implies the exercising of authority. In the context of registration, a decision on whether migration has taken place is a result of *legal* considerations⁶, and together with similar considerations for births and deaths, population registration is the way the Norwegian authorities decide who are residents of Norway and who are not (and similarly at municipal level). Other administrative agencies are legally bound to follow the registration of residency in the CPR.

36. Statistics based on these decisions are, for instance, used as a basis for determining the government transfers to the municipal sector. In this society the "de jure" concept is not just a formality; it creates a reality that the statistics cannot neglect.

Some of the authority is conceded to the other Nordic countries

37. More than 40 per cent⁷ of emigrations from Norway are to one of the other Nordic countries. According to the Nordic agreement on population registration, the decisions about

⁴ Collins Cobuild English Dictionary.

⁵ In Norwegian the word 'forvaltning' describes this element better than 'administrasjon'.

⁶ Among them is the question if the migrant (still) has got a valid residence permit from the immigration authorities (applies to non-Nordic citizens).

⁷ 2001-2005.

these migrations are made in these receiving countries, and not in Norway⁸. This fact only adds to the "impotence" of Statistics Norway in these matters.

38. An interesting point is that the Nordic agreement in fact represents an established solution for obtaining harmonisation between countries. In other words, a substantial part of the migrations to and from Norway is already covered by a harmonising arrangement that involves six other countries. In addition, the aim of the recommendations that each person should have only one place of usual residence is fulfilled for this geographical area. Introducing a new harmonisation regime (based on international recommendations) on top of the existing one may lead to *reduced* comparability of statistics for the countries most concerned.

A different division of labour and resources

39. In Norway, 400 man-years are devoted to population registration (including handling cases and recording data in the Central Population Register (CPR)). The Tax Administration is in charge of the activity. Statistics Norway uses only 4 man-years (approx.) for the tasks of harvesting data from the CPR system and communicating with the Directorate of Taxes. The difference between 400 and 4 speaks volumes.

40. The difference tells us that the population registration system does an invaluable data collection job for Statistics Norway's production of official statistics. In no way is Statistics Norway in a position to reject that contribution. Establishing a separate and equal statistical collection system (in order to gain more control of the data input) is out of the question.

41. The division of labour expresses a major compromise: Statistics Norway saves a lot of resources but has to "pay" by conceding influence on some factors that are regarded as important in international recommendations.

Statistics Norway has an objective interest in supporting the population registration system

42. Given the total dependence of Statistics Norway on the population registration system, it is obvious that Statistics Norway has no choice but to support it and try to strengthen its position in society. Through its contacts with other public agencies, Statistics Norway has provided information on the CPR, "promoted" active use of it and recommended that these agencies rely on the CPR as their only source of residential addresses of the citizens, for instance. In fact, this policy has led to positive results.

⁸ The agreement declares that "stays of less than 6 months should normally not be regarded as migration". That formulation puts some mild constraints on the Danish registration authorities, but does not have any implications for the immigration decisions in Iceland, Sweden and Finland where the minimum periods of stay are at least 6 months.

43. In this situation, it would be unwise for Statistics Norway to deviate from the CPR (if it were possible) with regard to the issue of who are to be considered as residents of Norway.

Statistics Norway has to ration its influence

44. As we have seen, there are factors that block Statistics Norway from complying with the international recommendations. However, it does not mean that Statistics Norway has no influence on the development. Due to its historical background, the Statistics Act and the present extensive use of population registration data, Statistics Norway has close and current contact with the population registration system, and thereby an influence on its development. In general, Statistics Norway is listened to.

45. However, it is not possible to solve all problems at once, and thus it is necessary to set priorities and to ration the influence. In recent years, Statistics Norway has been very concerned with the quality of the registration of residence addresses in the country, and consequently there has been less time and attention available for discussing issues related to international migration.

III.5. Alternative paths to increased international comparability for Norwegian migration statistics

46. Basically, there are three paths that can potentially provide more comparable statistics in the future:

47. One of these paths is future developments in the population registration system. It is not totally inconceivable that the system will go through a modernisation process in the forthcoming years that will eventually result in a more comprehensive population register which will include forms of connection with Norway other than being a 'resident'. Persons that are defined as short-term immigrants in the international recommendations may be included. In this event it must be possible to distinguish between, for instance, short and intermediate/long-term migrants. However, the chance of any radical re-organisation of the CPR happening soon is rather low.

48. The second solution is to neglect the demand for timeliness, and wait one year to observe whether the notified arrivals and departures have resulted in presences and absences of the required duration. This method deals only with migration events that are registered, and provides the capability to remove some of them, thereby *reducing* numbers. The method (alone) does not allow for including missing migrations in order to *increase* numbers that should have been higher (according to the recommendations).

49. The third solution is to carry out estimates using aggregated data. One problem is access to statistics that can serve as input to such estimates. Consequently, very simplifying assumptions will have to be made, and thus the reliability of the resulting statistics will be poor.

III.6. Some concrete comparison with the 2010 CES recommendations

50. The Norwegian body of residence rules is complex, and is open to discretion. The time criterion is not the only one that matters. This means that grasping the total effect of the rules and practices is more difficult than foreign users appear to believe.

51. Chapter 3 of the CES Recommendations outlines a resident population that could be named "the recommendation population". One basic difference between this population and the one that will be defined on the basis of the Norwegian set of rules is that the former one accepts persons without a residence permit. As a matter of principle, the Norwegian CPR does not record information that does not comply with Norwegian laws.

52. Another general difference is that the Norwegian set of rules refers to 6 months where the recommendations refer to 12 months. However, some emigration events are not registered in the CPR even if the person in question intends to stay abroad more than 6 months. There are register data that covers the majority of short-term immigrants (as defined by the recommendations), but the availability of information about the "3 to 5 month immigrants" is poor. Information on "3 to 5 month *emigrants*" is missing.

53. A consequence of the "legality principle" is that *illegal migrants* are not included in the CPR, or in any other administrative register for that matter⁹. Nobody knows if there are 5 000, 10 000 or 15 000 illegal immigrants in Norway at any point in time¹⁰. Dealing with this category of people is seen mainly as an issue for the Police.

54. Nor are *asylum seekers* included in the CPR, but as they are registered in the Aliens register (of the Norwegian Directorate of Immigration (UDI)) it would be possible to include certain categories of current asylum seekers in the recommendation population.

55. Unmarried *students* without children can choose where to be registered as resident (with the parents or at the school location). Some adaptation to the recommendation population would probably be possible by using student registers.

IV. THE SITUATION FOR A REGISTER-BASED NSI WITH REGARD TO THE DESCRIPTIVE VARIABLES

56. After discussing the definition of residency and migration events in a register system, a discussion of the variables describing characteristics of these persons and events follows. Most

⁹ Unless they have been legal residents before.

¹⁰ The Norwegian Directorate of Immigration (UDI) has initiated a project to develop better methods to estimate the number of persons present in Norway without a legal base.

of the focus is on stock variables, but as there is a close connection between event and stock variables, they are dealt with simultaneously.

IV.1. General factors that explain if a stock variable exists or not

57. The main factors that decide if a stock variable has been produced (or improved) in the NSI are the general demand for the variable, the quality requirements, the supply of necessary input data, and the marginal cost of producing/improving the variable. The marginal cost may be reduced by different types of investments in the general data basis.

58. Quality is defined as including coverage and reliability. Very often variables are good enough for a lot of purposes, but not for all. This sometimes makes it difficult to give a simple 'yes' or 'no' answer to requests from international recommendations.

59. There are several examples for which the international demand (among others from recommendations) for certain variables does not have a parallel at the national level. The cost of providing recommended variables will sometimes be unreasonably high if there is not a corresponding national demand for this information.

60. Ultimately, the supply of describing stock variables is mostly a matter of costs. It is always *technically* possible for an NSI to conduct a partial census in order to establish a variable (for one-time use only if the variable is not established in the event registration system), but normally the costs would be prohibitive. Here we assume that the extra resources for sending questionnaires to all the people are not available, and that registers are the chosen source.

IV.2. Access to relevant input data is the crucial factor

Data on events

61. Recommendations on flows (events) are concerned mostly with *future* statistics. If it turns out that it will be necessary to improve existing variables or introduce new ones in a CPR system, it is normal that a request from an NSI will be listened to. In practice however, due to lack of resources, or for technical or other reasons, there will always be constraints on changes in an administrative register system.

62. Data on migration events conducted in the *past* are equally interesting. High-quality demographic event data covering a long period of time is an invaluable source for the production of all kinds of statistics. "High quality" among other things means a high degree of consistency, dating, coverage and comparability over the years. Such data is required for such things as life course analysis. In addition, however, access to event data for a long period makes it quite easy to establish or supply stock variables. A good collection of event data solves several problems for a register-based NSI, and provides a lot of opportunities.

63. Countries that established their CPR 30-40 years ago have, in principle, access to event data from that entire period. In practice, however, some data have been lost, or were constructed or stored in formats that are not easy for today's programmers to understand. The necessary documentation may be missing. The oldest event data may lack just the variable(s) we want now, or did not follow modern statistical principles or do not enable the necessary distinctions. It may sometimes be difficult to understand whether a transaction is telling of a new demographic event, or whether it is just correcting the record of an existing one. In summary, extracting information from old event data may be a huge task.

64. In general, the NSIs of both Sweden and Denmark have probably exploited more of their event data than Statistics Norway.

The connection between event data and stock variables

65. Stock variables pose different challenges in a register system from event variables. The special feature of stock variables is that they reflect the present result of events that have taken place during quite a long period. A variable that is supposed to cover all members of the resident population has to cover selected events for a period of around 110 years. Event data collections do not normally stretch that far back, which means that other solutions have to be found.

66. It is often necessary to resign on the coverage. The eldest part of the population, or the oldest events, simply cannot be covered fully with valid and reliable information. However, for most users of migration statistics, these categories are likely to be of less interest than others.

67. Stock variables usually refer to the first immigration and/or the last one. Sometimes variables referring to the first immigration already exist as stock variables. If not, it is necessary to have access to the migration events in order to identify the first of them. With such data, it is easy to identify the last relevant event as well, and even the intermediate migrations (which can be used to count the number of stays abroad).

68. In general, event variables should have a corresponding variable in the stock, and the opposite. For the update of an existing stock variable there must be a corresponding variable in the event data. For the opposite, if a variable is found only on event data from a given moment, and not in the stock, it will take several decades before this variable can be established as a stock variable with a satisfactory coverage.

A common linking key and permission to link the actual data files are prerequisites

69. A prerequisite for using several data sources as input is that the different files have a common linking key. This key should identify the persons (as opposed to 'permissions' or other units). It is not necessary for this key to be common or of good quality in the original data, but at the point of linkage one key series must have been chosen and brought to the same time status. One of the reasons that the Norwegian register system functions relatively well is that practically all registers use the Personal Identification Number (the national identification number).

70. If there are legal constraints on linking certain data, it may be difficult to achieve the aims.

Sources for stock variables in a register system

71. NSIs in register countries that want new stock variables on the population have several possibilities. However, the available sources are normally very different from one country to another. In general, these are the conceivable sources or methods available:

1. The variable exists as a stock variable in the CPR
2. Old event data
3. Old computerised population censuses (i.e. the part of the censuses that was based on forms)
4. Other old stock files (from the CRP system or from the NSI)
5. Registers belonging to administrative agencies outside the population registration system
6. Recording old paper forms (non-computerised population censuses, or administrative forms)
7. Special data collections covering subgroups of the population (partial censuses)

1) If the NSI is lucky, the desired variable exists as an established stock variable in the CPR, updated by information from notifications. In some cases, however, the variable may exist, but with coverage or a set of values that is not satisfactory. One cannot expect a CPR to contain a lot of information from before it was established.

2) If the variable does not exist, or the coverage of an established variable is not good enough, the collection of event data may be a valuable source. The number of years covered by these data may determine whether the constructed or improved stock variable will be satisfactory. Countries with a short register history will have problems.

3) In Norway, the data files from the population censuses of 1960 and 1970 contributed to a better coverage and greater reliability of central stock variables such as 'country of birth' and 'first date in Norway'.

5) For migration statistics "other administrative registers" in practice means the register(s) maintained by the immigration authorities. In Norway, this has been an important source for the variable 'reason for immigration'.

6 and 7) In connection with variables in the subject area of migration statistics "recording old paper forms" and "special data collections" are methods that have been discussed but not used in Norway. In Sweden, however, a project has been carried out to increase the coverage of parental PINs by recording old documents.

72. It is easy to imagine how seemingly small differences in the data situation between the countries may be vital to the possibility of establishing wanted variables, or to achieving a satisfactory quality.

IV.3. Processing

73. With a mixture of input data sources, and data from different time periods, it is obvious that the data processing in some cases may be a demanding task and require a lot of resources. This means that the answer to requests about new or improved stock variables is sometimes "yes, probably technically possible, but at the moment the necessary capacity is not available".

74. The work to establish or improve a variable partly consists of "research" or "exploration" to find out about the qualities of the data and their usefulness for the construction of the variable. Inconsistencies between different sources then have to be worked out. Very often, that is done simply through the investigator's own assessment of the reliability of the different sources and input variables.

75. In many cases the task is to "clean up", repair deficiencies or generally carry out work that the register owner should have done. In other cases, the aim is to extract more from the data than they were originally intended to provide. Creating new combinations or variants of variables is a third kind of task. Only in very few cases can original administrative variables be used directly for statistical purposes without any processing by the NSI.

How far can an NSI go in processing administrative data? Imputations

76. Imputing basically means that missing values are replaced by values that are valid but have a lower reliability than is normally preferred. The purpose is to achieve a higher or even full coverage, as this will make the data easier to work with and the statistics easier to understand for the common user. However, there is a risk that the imputed values and thus the statistics will be misleading in some cases.

77. In Statistics Norway, imputing is seen more or less as a duty – as a way to exploit all available data "down to the last thread", for the benefit of both the taxpayers and the users. In Statistics Sweden, the governing principles until recently were quite different, and the policy there was to avoid imputations. It is possible that the research activities at Statistics Norway have made it more "daring" in this respect than most other NSIs.

78. Where the aim is to achieve reasonable international comparability of statistics from different countries, it is obvious that national peculiarities should be removed to the greatest extent possible. Among the peculiarities is different coverage for the variable in question. Imputation may be one way of dealing with that problem.

IV.4. Comments to variables in the 2010 CES Recommendations

79. Note that it is not possible to provide full documentation of relevant information here. Some variable names are not in accordance with the presentation given in the recommendations. Core variables in the 2010 CES Recommendations are marked.

80. **'Country of birth' (core):** Since the 1980s this variable has been given high priority in Statistics Norway, and a lot of work has been done to improve its quality. As it appears in internal data, the coverage is complete for the entire stock of 7 million persons¹¹. The main source is the original value reported and registered in the CPR, but other sources (among them the censuses of 1960 and 1970 and other CPR variables) have been used to improve coverage, reliability and relevance for the production of statistics.

81. **'Country of birth of parents':** Variables for country of birth of each of the parents do not exist in the CPR, but are found indirectly by using the mother's or father's PIN as a linking key. In this way the coverage of the parental country of birth is a result of the coverage of parental PINs. In Norway, the coverage is as good as can be expected for persons born in Norway since 1954. For elderly people and for all foreign born the coverage is poor. Statistics Sweden obtains a slightly higher coverage, whereas in Denmark it seems to be lower.

82. If the parent(s) is not known it is reasonable to assume that the parent(s) is born in the same country as the person (or as the other parent)¹². In this way the Norwegian statistics have full coverage of parents' country of birth, and the same applies to the grandparents.

83. Combinations of country of birth of the person, the parents and the grandparents form the basis for the Norwegian definitions on immigrant stocks¹³.

84. **'Place of usual residence n years before':** Linking with a stock file as of 1 January in the chosen year provides this variable.

Variables referring to past migration events

85. **'Ever-international migrant' (core):** All foreign-born are identified in the total stock. In addition, persons that have emigrated and immigrated since at least 1967 can be identified. Because of the residence rules, however, we will miss Norwegians that have stayed abroad while their families have been in Norway.

¹¹ Persons who have been residents, emigrated or deceased at any time since 1964.

¹² For more details refer to Kåre Vassenden: Statistical definitions of persons with immigrant background – new developments and international comparability. Paper written 26 April 2005 for the Nordic Demographic Symposium, Aalborg, Denmark, 28-30 April 2005.

¹³ http://www.ssb.no/english/subjects/02/01/10/innvbef_en/

86. There has never been any demand for statistics on this broad concept of migrants. In a small population with easy access to similar neighbouring countries it is not a big deal to have stayed abroad for a period of time.
87. **'Previous country of residence' (core?):** The variable exists in the CPR system both as an event (immigration) and stock variable. The coverage on the immigration notifications is not totally complete, but quite good.
88. As a stock-describing variable, the coverage in the CPR is far from complete. In data processed in Statistics Norway, the coverage is much better, covering persons that have immigrated since 1967. This variable has been a variable of minor importance. More attention will probably be given to this variable in the future, partly because of the international demand.
89. **'Date of arrival in the country' (core):** Interpreted as the date of *first* arrival this variable has always been regarded as essential for the production of migration statistics. Every person in the stock data belonging to Statistics Norway is assigned a first registered date of stay in Norway¹⁴. It does not exist as a stock-describing variable in the CPR.
90. This date is the *official* date of immigration in the CPR system. The immigrant may report an *actual* date of immigration as well, but the coverage is not complete and the population registry does not control whether this date is correct. In addition, the immigration authorities record dates related to their own processing, and these could be included for research purposes.
91. There is also a need for the date of the *last* arrival in the country. This variable exists, at least for the immigrations that have taken place in recent decades.
92. **'Total duration of residence':** A study carried out several years ago concluded that the difference between the reference date and the date of the first immigration was found to reflect the actual length of stay much better than the last date of immigration. Since then, the date of first immigration has been preferred for the computation of duration of residence.
93. It is true that it would have been desirable to have a variable that reflected the sum of time periods as resident in Norway (in accordance with the 2010 CES Recommendations). The resources available for this variable should be invested in the general work with the migration event data from 1967 onwards. With consistent base data, the computing of a total duration variable would be very simple.
94. **'Reason for immigration' and 'Refugee background':** Data from the Aliens register are used to construct a statistical variable 'reason for immigration' covering first time

¹⁴ There are dates back to 30 September 1964 (the starting point of the CPR), 1 November 1960 (the date of the census that was used as a basis for the CPR), or 1 November 1946 (when local population registries were introduced in all municipalities).

immigrations by non-Nordic citizens since 1990. The same data, including some use of imputations, are used to identify the persons that have come to Norway as refugees from the time of the uprising in Hungary in 1956¹⁵.

Variables referring to citizenship

95. In Norway, there is a rather low national demand for the citizenship variables mentioned in the recommendations. The exception is '**present country of citizenship**' (core).

96. Notifications on change of citizenship exist from 1977 only. This means that complete data referring to naturalisation events are found only from that year. It is possible to identify persons that have had a non-Norwegian citizenship before 1977 (at least regarding immigrants since 1967), but for them the date of change of citizenship is unknown.

97. '**Citizenship at birth**': For persons born in Norway, citizenship has been recorded on birth notifications since 1986. Notifications on change of citizenship from 1977 onwards can be used to derive the citizenship at birth for persons born in Norway that year or later. For all other persons, only a *first registered citizenship* is found, but whether this was the citizenship at birth is not possible to know.

98. '**Dual citizenship**': Norway sticks to the principle that people should preferably hold only one citizenship at a time. For that reason there is only one field of present citizenship in the CPR (at least in the present version). If a person has both Norwegian and foreign citizenship, the Norwegian citizenship is registered in the ordinary data field and the foreign one in a commentary field. The users of population registration data do not have access to/receive information on the commentary fields.

99. '**Date of naturalisation**': Data exists from 1977 onwards.

100. '**Type of naturalisation**': This concept does not exist in the Norwegian vocabulary. Depending on the classification, a variable of this type could be produced for naturalisations since 1977.

Variables on ethnicity, language and/or religion

101. The only "ethnicity variable" in the CPR is the variable 'the Sami electoral roll'. Discussions are underway as to whether this variable (together with some other useful data) should be exploited to produce Sami statistics based on person data.

¹⁵ Described in "New developments in the relations between the immigration authorities and Statistics Norway. Contributing paper for Joint ECE-Eurostat-ESCWA work session on Migration Statistics (Geneva, 8-10 May 2000)"

102. In the Aliens register, there are fields for both ethnicity and language, but the variables are filled in and used only in the handling of certain refugee cases. This means that in register data it is possible to identify some ethnic groups without their own state, but it is not possible to give a general description of the population according to ethnicity/language.

103. Religious communities are now obliged to register their members with their PIN (to obtain the government subsidy for their operations). However, access to this data is tightly restricted, and Statistics Norway is not allowed to receive individual records with the PIN included. In reality, this means that religion is not available as a person variable.

V. CONCLUSIONS

104. We have seen that there are several obstacles for complying with the parts of international recommendations referring to residence rules, but that the situation is not at all bleak when it comes to the describing variables. Some of the variables are not perfect, but in practical terms they are generally adequate.

105. Discussions about the international comparability of the Norwegian migration statistics sometimes seem to lead to the conclusion that the glass is half empty. Seen from Statistics Norway's point of view, however, the glass is half full – at least. Statistics Norway has access to migration statistics data that many other NSIs can only dream about.

106. Access to register data provides a lot of possibilities for the production of statistics. The Norwegian population statistics system is coherent and comprehensive, and covers the whole population on a current basis. With this system, the marginal cost of producing some types of additional statistics is rather low.

107. However, the data situation in Norway and in other register countries is not only good. There is an ongoing struggle for a higher quality of data. For a major part of this struggle the recommendations are not relevant, as they do not cover issues such as in relation to reliability and coverage. At the national level, these issues alone draw a lot of the total attention devoted to the statistical data basis.

108. For Statistics Norway, it is important to contribute, in some way or another, to the reduction of unintended deviations between the registration rules and the reality. Another priority would be to invest in improving the basic data in general. A solid foundation makes it possible to satisfy a large range of demands.

109. Even if the situation regarding the definitions of residence seems to be quite locked, it should be noted that definitions constitute just a part of a broader totality that influences the usefulness of the statistics. Overall, the situation for Norwegian statistics must be regarded as having significant advantages even for users that need to make international comparisons.
